



PANDA Soft International

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AUCKLAND,

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AEROBAT

INSTRUCTION MANUAL

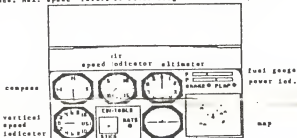


INSTRUCTIONS

Specifications:

Max. Speed	100 knots	Service Ceiling ..	14,000 ft
- with flaps ..	95 knots	Max. Climb	700 ft/min
Stall speed	47 knots	Max. loverted	
- with flaps ..	43 knots	Flight time ...	30 seconds
Take off speed ..	50 knots	Landing speed	below 4 kts V&I.

Note: These figures are approximate only and some vary with altitude. "Max. speed" refers to level flight under full power.



Control keys:

[P] - increase power	Direction control	up/climb	
[O] - decrease power	via joystick		
[B] - brakes on/off	and/or cursor	left	right
[F] - flaps on/off	keys:	turn	turn
[R] - increased control movement		down	

The instruments are:

Compass: Shows direction of the aircraft. On the map the aircraft is shown as a blue cross and will move in the direction of the compass needle. If the aircraft is in a steep vertical attitude, the reading becomes meaningless.

Air Speed Indicator: Gives air speed in knots [1 knot=1 nautical mile per hour]. Do not exceed 95 knots with flaps lowered.

Vertical Speed Indicator: Gives vertical speed in knots. [1 knot is approximately 100 ft/min]. If the needle is above zero you are climbing; below, you are descending. Landing should be accomplished at a descent rate slower than 4 knots.

Artificial Horizon: Shows position of the horizon. When in a east vertical position the horizon appears as a dot on the edge of the instrument.

Altimeter: Indicates altitude in feet. Read as you would read a clock, except that the big hand points to hundreds of feet and the small hand to thousands of feet. The maxium altitude or service ceiling, as it is called, for Aerobot is 14,000 feet.

Fuel gauge: This scale instrument at the top right hand corner shows the fuel contents available. Full is when the ether is to the extreme right of the gauge.

Power indicator: You'll find it just below the fuel gauge and when the indicator is to the extreme right it means you're applying full power. Push [F] to increase power; [G] to decrease.

Map: At the bottom right hand corner of the screen. The hills are shown as upside-down V's; buildings are dots and the a/c symbol is the blue cross. The runway is the black line in the center; and the lake and arched bridge are a black and blue line southeast of the runway. The map covers an area of ± 40 by 40 kilometers. The map is of a "wrap around type", meaning that once the boundary is reached the aircraft will reappear on the other side.

Stick: This instrument shows the joystick position and amount of reflection applied.

The controls

Ailerons: They make the aircraft bank and roll. You control these either with sideways movement of the joystick or right/left cursor key. The rate of roll is proportional to the airspeed.

Elevator: This controls the pitch (i.e. nose up, nose down). To raise the nose or start a climb use the down cursor key or move the joystick back. The reverse applies for a descent or dive.

Rudder: This controls the yaw (sideways swing). Also used for steering when on the ground. When in flight the sensitivity of the rudder is dependent on throttle setting and stability.

Flaps: This is a "push on/push off" control via the [7] key. Flaps are not necessary at take off. They do however allow steeper approaches to be made without too much speed. The maxium speed with flaps down is 93 knots; stall speed is 43 knots.

Brakes: Like the flap control it is an "on/off" control. Use the [8] key to apply or release the brakes.

Liter: The [8] key or fire button will enable the control movements via the cursor keys or joystick. The a/c will be twice as responsive.

Throttle: Open the throttle with the [P] key. To close press [O].

F L Y I N G A E R O B A T

1. TAKE OFF: To take off apply full power and release the brakes. Once past rotation speed (+50 kts) the nose should be raised by pressing the down arrow key or down movement of the joystick. Don't climb too steeply or you will stall and say crash. The border colour will change from red to black once past the stalling safe flylog speed (stall speed). The take off screen is shown on page 1.

2. LANDING: Line up as accurately as possible with runway 18 (southerly direction) at a reasonable distance so to allow a gradual descent. Reduce power and slow to a speed of +60 knots. Place say be used to allow a faster descent at a steeper angle when the approach is too high or at a slower speed. Touch down should be at a vertical speed slower than 4 knots (on the VSI). Aerobat allows significantly harder landings than in real life to help the user in the landing sequence, which is the hardest part of piloting.

Once on the ground you may test, using the rudder control (cursor keys or joystick left/right) and brakes to manoeuvre. When you have stopped completely with the brakes on after a successful landing the fuel will be topped up, allowing you to taxi to the end of the runway to take off again.

3. IN FLIGHT:

[a] Turnings: To turn, apply bank as required to maintain the desired turning rate. As in nose drops also apply down pressure on the joystick or up elevator with the (down) cursor key to keep the nose level.

[b] Stalling: A stall occurs when the aircraft has not enough forward speed to create enough lift. In real flying this situation can lead to dangerous situations, but pilots are extensively trained to cope with them. Without going into too detailed aerodynamic explanations, the effect is that the nose will suddenly drop and owing to torque, created by the turning of the propeller, the left wing drops. To counteract the effect is to increase power immediately and lower the nose at the same time until a safe speed is regained. Make up for loss in height by climbing back to the original altitude. You are warned of an approaching stall by the change of the screen border colour to red.

[c] Aerobatics: The following manoeuvres can be performed flying Aerobat: Loops (enter at 120 kts); Stalls; Stall turns; Rolls; Barrel rolls and even combined looping/rolling aerobatics. Spinning is beyond the scope of this simulation. This program allows higher negative load factors than the real aircraft. It is suggested to read aviation literature if you'd like to know more about aerobatics and its manoeuvres.

[d] Miscellaneous: It is possible to fly under the arched bridge over the lake on east of the airfield. It is recommended to execute a long, gentle approach at a reasonably slow speed, say +60 knots. Good luck and MANY HAPPY LANDINGS WITH AEROBAT!